UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,005	02/01/2001	Shinichiro Aizaki	01054/LH	7481

1933 7590 02/17/2004

FRISHAUF, HOLTZ, GOODMAN & CHICK, PC
767 THIRD AVENUE
25TH FLOOR
NEW YORK, NY 10017-2023

EXAMINER	
VO, TUNG T	

ART UNIT	PAPER NUMBER
2613	10

DATE MAILED: 02/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/775,005	AIZAKI ET AL.	
	Examiner	Art Unit	
	Tung T. Vo	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6,7,10-25,27 and 30-32* is/are rejected.

7)☒ Claim(s) *5,8,9,26,28 and 29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6 and 9*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 06/22/01 and 01/23/03 has been considered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 10-12, 14, 24-25, and 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Kojima (US 5,703,714).

Re claims 1, 14, 24-25, and 30, Kojima discloses a microscope system (fig. 1) in which an electronic camera (18 of fig. 1) is used to pick up an observation image by a microscope (9 of fig. 1), comprising a controlling section (30 of fig. 1, see also fig. 3) for setting an image pickup operation of an image pickup element in said electronic camera to an optimum state in accordance with a state of at least one of an optical system combination (6-18 of fig. 1) for a projection magnification of at least an objective lens (8 of fig. 1) and a photo eyepiece (14 of fig. 1) on a microscope side, an observation method (102 of fig. 3; OBSERVATION METHOD INFORMATION INPUT SECTION of fig. 17), and lighting conditions (34 and 35 of fig. 1).

Re claims 2-4, Kojima further discloses a microscope controlling section (30 of fig. 1) for controlling an operation of said microscope; an image pickup element driving section (11, CUBE POSITION DETECTION CKT, CUBE DRIVING CKT of fig. 17) for driving said image pickup element, wherein said controlling section sets an image pickup element drive mode of said image pickup element driving section to a high speed drive mode, while the controlling section detects operation information outputted from said microscope controlling section (36 of fig. 17); an image pickup element driving section for driving said image pickup element, wherein said controlling section sets a binning number of said image pickup element driving section based on an objective lens type outputted from said microscope controlling section (CUBE DRIVING CKT of fig. 17); wherein said controlling section comprises a memory (100 of fig. 3) in which a table (fig. 15) of the objective lens type and the corresponding binning number is stored, compares the objective lens type outputted from said microscope controlling section with said table to determine the binning number, and sets the binning number as the binning number of said image pickup element driving section (CUBE KIND TABLE, CONTROL PARAMETER TABLE, OPTICAL ELEMENT KIND TABLE, 100 of fig. 17).

Re claims 10-11, Kojima further discloses a microscope controlling section (30 of fig. 17) for controlling an operation of said microscope; and an AE calculating section (33 of fig. 1) for performing an automatic exposure control, wherein said controlling section comprises a memory (100 of fig. 17) in which an AE calculation mode table of an observation method

(OBSERVATION METHOD INFORMATION INPUT SECTION of fig. 17) and a corresponding exposure calculation mode is stored (100 of fig. 17), compares the observation method outputted from said microscope controlling section with said table to determine the exposure calculation mode (CONDENSER OPTICAL ELEMENT CORRECTION MODULE of fig. 17), and sets the exposure calculation mode to said AE calculating section; wherein said controlling section stops an exposure time control in said AE calculating section, while the controlling section detects information of light path change of said microscope outputted from said microscope controlling section (30 of fig. 17).

Re claim 12, Kojima discloses a microscope controlling section for controlling an operation of said microscope (30 of fig. 1); and a frame memory (RAM, ROM, 46 and 47 of fig. 3) for storing image data picked up by said image pickup element, wherein said controlling section stops rewriting of the image data to said frame memory (101 of fig. 3), while the controlling section detects information of light path change (101 of fig. 3) of said microscope outputted from said microscope controlling section.

Re claims 31, Kojima further discloses a microscope controlling section for controlling an operation of said microscope, wherein said controlling section turns OFF displaying by said display section during exposure, when an observation method outputted by said microscope controlling section is a fluorescent observation (fig. 26).

Re claim 32, Kojima further discloses a microscope controlling section (30 of fig. 17) for controlling an operation of said microscope, wherein said controlling section displays a residual exposure time in a part of said display section, and brings other parts to a low luminance or non-emission state during exposure, when an observation method outputted by said microscope controlling section is a fluorescent observation, and static image pickup is instructed (5, 33 of fig. 24).

4. Claims 1, 14, 23-24, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Hayashi (US 5,833,617).

Re claims 1, 14, 24, and 30, Hayashi discloses a microscope system (fig. 16) in which an electronic camera is used to pick up an observation image by a microscope, comprising a controlling section for setting an image pickup operation of an image pickup element in said electronic camera to an optimum state in accordance with a state of at least one of an optical system combination for a projection magnification of at least an objective lens and a photo eyepiece on a microscope side, an observation method (col. 31 through col. 34).

Re claim 23, Hayashi further disclose a microscope controlling section for controlling an operation of said microscope; and an image adjusting section for adjusting image data picked up by said image pickup element; wherein said controlling section comprises a memory in which a color matrix in accordance with lighting conditions is stored, compares the lighting conditions outputted from said microscope controlling section with a content of said memory, and sets the color matrix in accordance with the lighting conditions to said image adjusting section, and said image adjusting section performs a color conversion of the image data in accordance with the

set color matrix (see 210, 217 of fig. 16; note in the video signal forming circuit (217 of fig. 16), the ordinary image signals are subjected to digital-to-analog conversion, color matrix processing, and encoding).

5. Claims 1-4, 10-12, 14, 24-25, 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawasaki (US 4,661,692) as shown in figures 1-24C.

6. Claims 1-2, 6-7, 14, 24-25, 27, and 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoneyama et al. (US 5,933,513) as shown in figure 1.

7. Claims 1, 13, 14, 24, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Garner et al. (US 6,337,472 B1).

Re claims 1, 14, 24, and 30, Garner discloses a microscope system (10 fig. 1) in which an electronic camera (30 of fig. 1) is used to pick up an observation image by a microscope (9 of fig. 1), comprising a controlling section (32 of fig. 1) for setting an image pickup operation of an image pickup element in said electronic camera to an optimum state in accordance with a state of at least one of an optical system combination (24, 26, 28 of fig. 1) for a projection magnification of at least an objective lens (26 of fig. 1) and a photo eyepiece (34 of fig. 1) on a microscope side, an observation method (the display of fig. 1, see also fig. 5), and lighting conditions (22 of fig. 1). See also col. 9, line 63 through col. 11, line 67.

Re claim 13, Garner further discloses a microscope controlling section (30 of fig. 1) for controlling an operation of said microscope; and a cooling section for cooling said image

pickup element (note that the imaging spectrometer (28 of fig. 1) is an ARC imaging spectrograph and the camera (30 of fig. 1) a Photometrix cooled CCD camera), wherein said controlling section (32 of fig. 1) changes a set temperature set to said cooling section in accordance with an observation method outputted from said microscope controlling section (note the imaging spectrograph (28 of fig. 1)is controlled by the computer (32 of fig. 1) using an imaging spectrograph control panel).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 15-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawasaki (US 4,661,692) as applied to claim 14, and further in view of Horiuchi et al. (US 5,594,544).

Re claims 15-23, Kawasaki further teaches a gain correction value(2 of fig. 1) in accordance with a position on an image pickup surface of said image pickup element is stored, and said image adjusting section performs a gain correction of the image data corresponding to the position on the image pickup surface of said image pickup element based on the gain correction value of said pattern.

It is noted that Kawasaki does not teach or suggest shading correction a shading correction pattern in accordance with an objective lens type and a zoom magnification of the

intermediate magnification change optical system is stored, compares the objective lens type and the zoom magnification of the intermediate magnification change optical system outputted from said microscope controlling section with a content of said memory, and sets the shading correction pattern in accordance with the zoom magnification of the intermediate magnification change optical system to said image adjusting section, and said image adjusting section performs a shading correction of the image data in accordance with the set shading correction pattern.

However, Horiuchi teaches a shading correction pattern (123 of fig. 5) in accordance with an objective lens type and a zoom magnification of the intermediate magnification change optical system is stored, compares the objective lens type and the zoom magnification of the intermediate magnification change optical system outputted from said microscope controlling section with a content of said memory, and sets the shading correction pattern in accordance with the zoom magnification of the intermediate magnification change optical system to said image adjusting section, and said image adjusting section performs a shading correction of the image data in accordance with the set shading correction pattern.

Taking the combined teachings of Kawasaki and Horiuchi as a whole, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Horiuchi into the Kawasaki system for the same purpose of performing shading correction. Doing so would improve the quality of the image.

Allowable Subject Matter

10. Claims 5, 8-9, 26, 28-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Zhon et al. (US 5,732,150) discloses a method and system for multiple wavelength microscopy image analysis.

Toda et al. (US 5,859,364) discloses a scanning probe microscope.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung T. Vo whose telephone number is (703) 308-5874. The examiner can normally be reached on 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris. Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TUNG T VO
PATENT EXAMINER

T.Vo

Tung T. Vo
Examiner
Art Unit 2613